

PATENT

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Date:

4-23-03

Himanshu S. Amin

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TECHNOLOGY CENTER 2800

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:

Applicant(s): Michael H. Backman, et al.

Examiner: Judson Jones

Serial No: 09/955,268

Art Unit: 2834

Filing Date: September 18, 2001

Title: PATH ARRANGEMENT FOR A MULTI-TRACK LINEAR MOTOR SYSTEM
AND METHOD TO CONTROL SAME

Box Non-Fee Amendment
Assistant Commissioner for Patents
U.S. Patent and Trademark Office
Washington, D.C. 20231

REPLY TO OFFICE ACTION DATED JANUARY 23, 2003

Dear Sir:

Favorable reconsideration of the above-identified patent application is respectfully requested in view of the comments below.

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REMARKS

Claims 1-27 are currently pending in the subject application and are presently under consideration. Favorable reconsideration of the subject patent application is respectfully requested in view of the comments herein.

I. Rejection of Claims 1-9, 11-17, and 19-26 Under 35 U.S.C. § 103(a)

Claims 1-9, 11-17 and 19-26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Thornton *et al.* 6,101,952 in view of Mihirogi 5,193,767. It is submitted that this rejection should be withdrawn for at least the following reasons. The combination of Thornton *et al.* and Mihirogi does not teach or suggest every limitation set forth in the subject claims.

To reject claims in an application under § 103, an examiner must establish a prima facie case of obviousness. A prima facie case of obviousness is established by a showing of three basic criteria. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) **must teach or suggest all the claim limitations.** See MPEP § 706.02(j). **The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure.** See *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991) (emphasis added).

In particular, neither Thornton *et al.* nor Mihirogi teaches or suggests a path for a linear motor comprising a routing system being operative to effect movement of a stage between the first path portion and a selected branch path portion, as recited in claims 1, 11, 20, 23, and 25. In the Office Action dated January 20, 2003, the Examiner concedes that Thornton *et al.* does not disclose the routing system between the first path portion and the branch path portions.

Moreover, the teachings of Thornton *et al.*, considered in its entirety, include disclosures that teach away from the claims. A prior art reference must be considered in its entirety, *e.g.*, as a whole, including portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983). See MPEP §

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2141.02. The teachings of Thornton *et al.* require the use of a guideway rail and guide plate for guidance of a vehicle. Suggested in Thornton *et al.*, all means of guidance must be accomplished by controlling the electromagnetic force upon a guideway rail, which the guide plate follows. Additionally, Thornton *et al.* noted that the preferred method for switching involved use of magnetic forces as opposed to mechanical motion. This teaches away from the use of a routing system to direct a stage to a selected branch. The routing system selectively couples the first path portion with the selected branch path portion. In claims 3-8, 12-16, and 22, coupling is accomplished through means of a mechanically movable bridge. Therefore, it would not have been obvious to one of ordinary skill in the art to include a routing system, as mentioned in Mihirogi, in the path for a linear motor.

Furthermore, claims 9, 17, and 26 are not obvious in light of Thornton *et al.*, which teaches that the system for switching involves the guide plate following a guideway rail that diverges from the original guideway rail. In contrast, claims 9, 17, and 26 do not include an original path to follow. Instead, the routing system allows for selecting a set of armature windings along the path from the first path portion to the selected branch path portion, which the stage will follow.

Additionally, the Examiner relied on the teachings of Mihirogi to make up for the deficiencies of Thornton *et al.* Mihirogi does not teach the use of linear motor systems to effect switching; thus, since Thornton *et al.* does not suggest that mechanical movement for the bridge should be used, applying Mihirogi would not have been obvious to one of ordinary skill in the art. Also, Mihirogi teaches the use of a movable girder type switch track, but does not apply to the path for a linear motor.

For at least the aforementioned reasons, neither Thornton *et al.* nor Mihirogi, individually, or in combination, teach or suggest all the limitations of claims 1, 11, 20, 23, or 25. Claims 2-10, 12-19, 21-22, 24, and 26-27 respectively depend from claims 1, 11, 20, 23, or 25. Accordingly, the combination of Thornton *et al.* and Mihirogi do not make obvious claims 1-27. Withdrawal of this rejection and allowance of such claims are respectfully requested.

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II. Rejection of Claims 10 and 18 Under 35 U.S.C. § 103(a)

Claims 10 and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Thornton *et al.* as modified by Mihirogi, and further in view of Miyazaki *et al.* 4,849,664 and Nogami 6,285,988. As claims 10 and 18 are directly or indirectly dependent upon independent claims 1 and 11, which are now believed to be allowable per the aforementioned reasons, it is believed these claims are now also allowable. Withdrawal of this rejection is respectfully requested.

III. Allowable Subject Matter

Claim 27 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. As claim 27 is directly or indirectly dependent upon independent claim 25, which is now believed to be allowable per the aforementioned reasons, it is believed this claim is now also allowable. However, Applicant reserves the right to cast such claim into independent form at a later date, if necessary.

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IV. Conclusion

The present application is believed to be condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063.

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicant's undersigned representative at the telephone number listed below.

Respectfully submitted,

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